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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/628,014

07/25/2003

John Bruce Clayfield Davies

7194-4

3991

30565

7590

07/21/2009

WOODARD, EMHARDT, MORIARTY, MCNETT & HENRY LLP  
111 MONUMENT CIRCLE, SUITE 3700  
INDIANAPOLIS, IN 46204-5137

EXAMINER

HOFFMAN, MARY C

ART UNIT

PAPER NUMBER

3733

MAIL DATE

DELIVERY MODE

07/21/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/628,014	<b>Applicant(s)</b> DAVIES, JOHN BRUCE CLAYFIELD	
	<b>Examiner</b> MARY HOFFMAN	<b>Art Unit</b> 3733	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14,27 and 29-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14,27 and 29-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

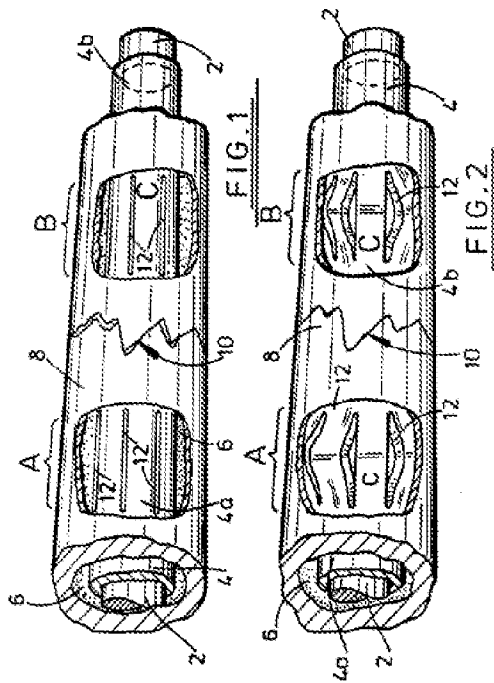
### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13, 27 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies (GB 2268068) in view of Naybour (US 6,200,349).

Davies discloses a bone nail (FIGS. 1 and 2) comprising a nose portion and an opposing portion coupled via a tie bar, the bone nail including at least two expansion portions longitudinally spaced between the nose portion and the opposing portion so as to be positionable on either side of a bone fracture during use, wherein each expansion portion is configured to be radially expanded under a compressive force applied by the nose portion and the opposing portion coupled via the tie bar. (See below figures)



The expansion portions comprise at least one elongate portion having a pair of elongate slots on either side thereof.

The at least one portion first comprises a first end portion of the at least one elongate portion and a second end portion of at least one elongate portion.

The at least one second portion comprises a mid portion of the elongate portion forming a remainder of the elongate portion.

The at least one first portion further comprises a first end of at least one slot and a second end of at least one slot.

The at least one second portion comprises a mid portion of the slot forming a remainder of the slot.

Each expansion portion is shaped and configured to elastically bow outwards when a compressive force is applied axially to the expansion portion.

The longitudinal portions of the expansion portion (the strips between slots) narrow at opposing ends, are spaced substantially equidistant around a circumference of the expansion portion. and have a curved profile.

The expansion portions are made of a stiffly resilient plastics material.

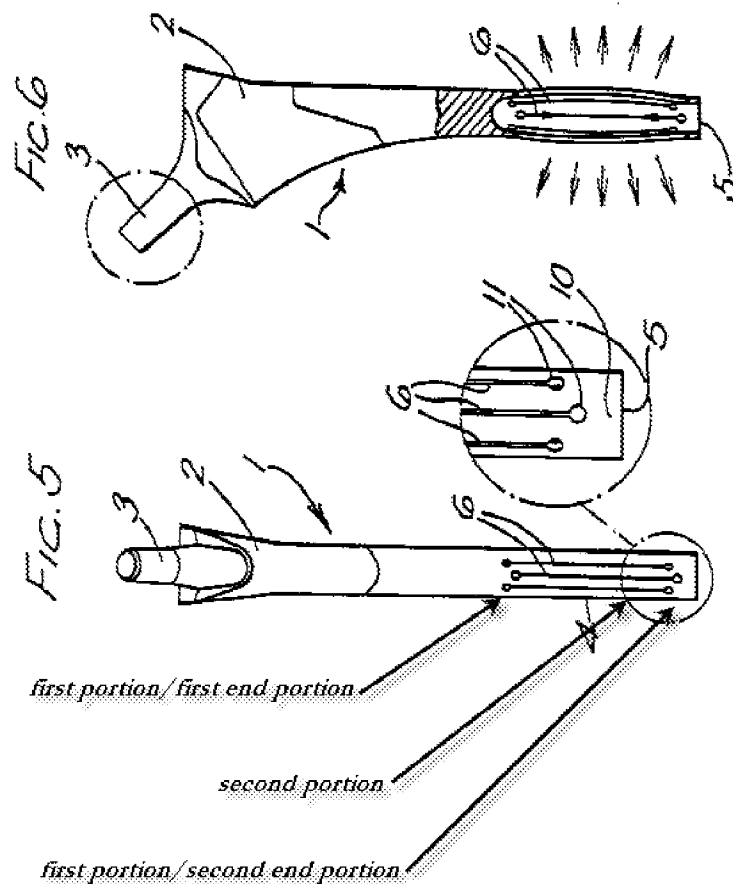
A multiplicity of components are positioned along the tie bar, the multiplicity of components including the at least two expansion portions, wherein respective ends of the components are interengaged with each other and with the opposing portion such that disengagement of parts is prevented when the compressive force is released.

Davies discloses the claimed invention except for each expansion portion having at least one first portion, at least one characteristic of which is selected to be different to a corresponding at least one characteristic of at least one second portion of the expansion portion, including the at least one characteristic comprising a thickness and/or width of the at least one first portion and the at least one second portion, the first end portion and/or second end portion of the elongate portion being thinner or thicker and/or narrower or broader than an adjacent portion of the at least one elongate portion, and the first end and/or the second end of at least one slot being broader than an adjacent portion of the at least one slot.

Naybour discloses an expansion portion having at least one first portion, at least one characteristic of which is selected to be different to a corresponding at least one characteristic of at least one second portion of the expansion portion, including the at least one characteristic comprising a thickness and/or width of the at least one first portion and the at least one second portion, the first end portion and/or second end

Art Unit: 3733

portion of the elongate portion being thinner or thicker and/or narrower or broader than an adjacent portion of the at least one elongate portion, and the first end and/or the second end of at least one slot being broader than an adjacent portion of the at least one slot, for providing a suitable slot structure for providing an expansion portion. (See below figure).



It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the expansion portion of Davies with an expansion portion having at least one first portion, at least one characteristic of which is selected to be different to a corresponding at least one characteristic of at least one second portion

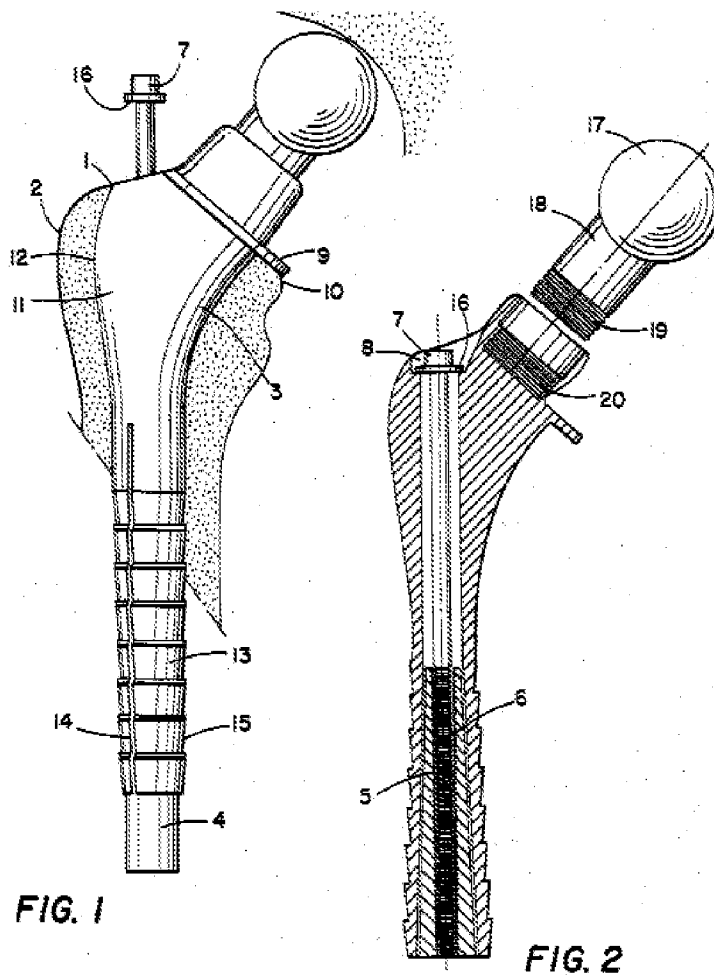
Art Unit: 3733

of the expansion portion, , including the at least one characteristic comprising a thickness and/or width of the at least one first portion and the at least one second portion, the first end portion and/or second end portion of the elongate portion being thinner or thicker and/or narrower or broader than an adjacent portion of the at least one elongate portion, and the first end and/or the second end of at least one slot being broader than an adjacent portion of the at least one slot in view of Naybour to as providing a suitable slot structure for providing an expansion section, since such is a functional equivalent and provides the predictable result of allowing expansion of the expansion portion.

Claims 14, 29-32, 34, and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies (GB 2268068) in view of Naybour (US 6,200,349) further in view of Gianezio et al. (U.S. Patent No. 4,520,511 ).

Davies in view of Naybour discloses the claimed invention except for serrations. (Also, Davies in view of Naybour fail to disclose that the expansion portion includes varying thickness, that the thickness is reduces at one end or both, and that a plurality of recesses is formed on the outer surface of the elongate portion.)

Gianezio et al. disclose serrations to increase gripping effect (col. 2, lines 10-13). The serration result in varying thickness, the thickness being reduced at one end, and a plurality of recesses being formed on the outer surface of the elongate portion.)



It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Davies in view of Naybour with serrations further in view of Gianezio to increase gripping effect.

Davies in view of Naybour further in view of Gianezio discloses the claimed invention except for the expansion portion being made out of a metallic material, such as titanium or titanium alloy.

Regarding claims 36-37, 39, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the expansion portion of



Art Unit: 3733

Davies in view of Naybour further in view of Gianezio out of a metallic material, such as titanium or titanium alloy, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 1-13, 27, 29-30, 33, 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies (GB 2268068) in view of Foley at al. (US 6,676,665).

Davies discloses a bone nail (FIGS. 1 and 2) comprising a nose portion and an opposing portion coupled via a tie bar, the bone nail including at least two expansion portions longitudinally spaced between the nose portion and the opposing portion so as to be positionable on either side of a bone fracture during use, wherein each expansion portion is configured to be radially expanded under a compressive force applied by the nose portion and the opposing portion coupled via the tie bar. The expansion portions comprise at least one elongate portion having a pair of elongate slots on either side thereof. The at least one portion first comprises a first end portion of the at least one elongate portion and a second end portion of at least one elongate portion. The at least one second portion comprises a mid portion of the elongate portion forming a remainder of the elongate portion. The at least one first portion further comprises a first end of at least one slot and a second end of at least one slot. The at least one second portion comprises a mid portion of the slot forming a remainder of the slot. Each expansion portion is shaped and configured to elastically bow outwards when a compressive force is applied axially to the expansion portion. The longitudinal portions of the expansion portion (the strips between slots) narrow at opposing ends, are spaced substantially

Art Unit: 3733

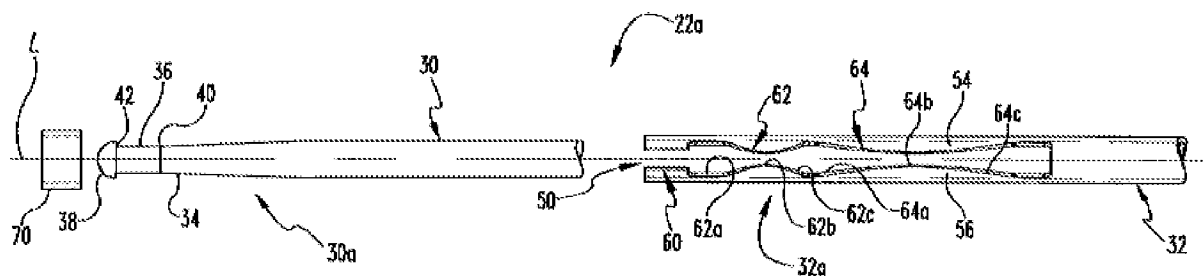
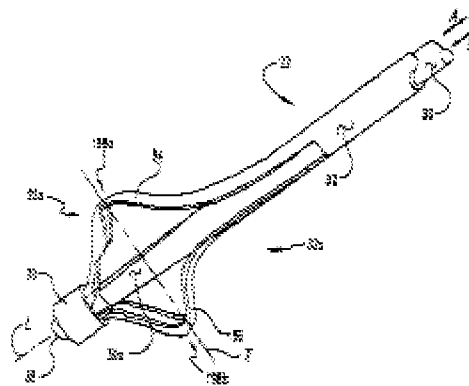
equidistant around a circumference of the expansion portion. and have a curved profile. The expansion portions are made of a stiffly resilient plastics material. A multiplicity of components are positioned along the tie bar, the multiplicity of components including the at least two expansion portions, wherein respective ends of the components are interengaged with each other and with the opposing portion such that disengagement of parts is prevented when the compressive force is released.

Davies discloses the claimed invention except for each expansion portion having at least one first portion, at least one characteristic of which is selected to be different to a corresponding at least one characteristic of at least one second portion of the expansion portion, including the at least one characteristic comprising a thickness and/or width of the at least one first portion and the at least one second portion, the first end portion and/or second end portion of the elongate portion being thinner or thicker and/or narrower or broader than an adjacent portion of the at least one elongate portion, and the first end and/or the second end of at least one slot being broader than an adjacent portion of the at least one slot. Similarly, Davies fails to disclose that varying thickness from the inner to outer surface and recesses on the inner surface.

Foley et al. disclose expansion portion having at least one first portion, at least one characteristic of which is selected to be different to a corresponding at least one characteristic of at least one second portion of the expansion portion, including the at least one characteristic comprising a thickness and/or width of the at least one first portion and the at least one second portion, the first end portion and/or second end portion of the elongate portion being thinner or thicker and/or narrower or broader than

Art Unit: 3733

an adjacent portion of the at least one elongate portion, the first end and/or the second end of at least one slot being broader than an adjacent portion of the at least one slot, and that varying thickness from the inner to outer surface and recesses on the inner surface, for providing a suitable structure that readily radially expands. (See below figures)

**Fig. 2**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the expansion portion of Davies with an expansion portion having at least one first portion, at least one characteristic of which is selected to be different to a corresponding at least one characteristic of at least one second portion of the expansion portion, , including the at least one characteristic comprising a

Art Unit: 3733

thickness and/or width of the at least one first portion and the at least one second portion, the first end portion and/or second end portion of the elongate portion being thinner or thicker and/or narrower or broader than an adjacent portion of the at least one elongate portion, and the first end and/or the second end of at least one slot being broader than an adjacent portion of the at least one slot in view of Foley et al. to provide a suitable structure that readily radially expands.

Davies in view of Foley et al. discloses the claimed invention except for the expansion portion being made out of a metallic material, such as titanium or titanium alloy.

Regarding claims 37 and 39, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the expansion portion of Davies in view of Foley et al. out of a metallic material, such as titanium or titanium alloy, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416

Claims 14, 31-32 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies (GB 2268068) in view of Foley et al. (US 6,676,665) further in view of Gianezio et al. (U.S. Patent No. 4,520,511 ).

Davies in view of Foley et al. discloses the claimed invention except for serrations/recess on the outer surface.

Gianezio et al. disclose serrations/recess on the outer surface to increase gripping effect (col. 2, lines 10-13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Davies in view of Foley et al. with serrations/recess on the outer surface further in view of Gianezio to increase gripping effect.

Davies in view of Foley et al. further in view of Gianezio discloses the claimed invention except for the expansion portion being made out of a metallic material, such as titanium or titanium alloy.

Regarding claim 26, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the expansion portion of Davies in view of Foley et al. further in view of Gianezio out of a metallic material, such as titanium or titanium alloy, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 3733

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARY HOFFMAN whose telephone number is (571)272-5566. The examiner can normally be reached on Monday-Thursday 10:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo C. Robert can be reached on 571-272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mary C. Hoffman/  
Examiner, Art Unit 3733  
/Eduardo C. Robert/  
Supervisory Patent Examiner, Art Unit 3733